AMENDED PATENT CLAIMS

1. Tool device for high-speed crosscutting, comprising a striking unit (10), a tool housing (20), a damper unit (30), a movable crosscutting tool (40) and a fixed crosscutting tool (50), characterised in that the tool housing (20) has at least two curved supporting surfaces (218) for positioning of the movable crosscutting tool (40), which supporting surfaces (218) have the same radius (R), and in that between the said supporting surfaces (218) there is a recess (217) for a striking piston (11) belonging to the striking unit (10).

2. Tool device according to Claim 1, characterised in that the tool housing (20) is provided with a cylindrical recess (219) having the same centre line (C) and the same radius (R) as the said supporting surfaces (218) and which recess is designed for arrangement of the fixed crosscutting tool (50) inside the tool housing (20).

3. Tool device according to Claim 2, characterised in that the said cylindrical recess (219) is disposed in a homogenous base element (21) belonging to the said tool housing (20).

4. Tool device according to Claim 3, characterised in that coaxially with the said cylindrical recess (219) there is disposed an axially displaceable adjusting mechanism (62, 63) for axially adjustable positioning of the said fixed crosscutting tool inside the said recess (219).

5. Tool device according to Claim 3, characterised in that a supporting member (23) for the damper (30) is designed to be able to be anchored directly to the said base element (21).

6. Crosscutting tool for high-speed crosscutting, which crosscutting tool (40) comprises a body (42, 43) having a through-hole (41) and preferably a striking surface (44), characterised in that the body (42, 43) has at least two positively curved edge portions (43A, 43B), having a certain radius (R), and which preferably are symmetrically placed with respect to a dividing plane which coincides with the centre axis (C) of the said hole (41) designed to be used for radial positioning of the crosscutting tool (40) inside a tool housing (20).

7. Crosscutting tool according to Claim 6, characterised in that the said radius (R) is 0.5-1.5 L, preferably equal to L, wherein L relates to the distance from the centre of the said through-hole (41) to the said edge portion (43A, 43B).

8. Crosscutting tool according to Claim 6, characterised in that the extent (B) in the circumferential direction of the said edge portion (43A; 43B) corresponds to 0.5-5 T_v, wherein T_v relates to the thickness of the said body (42, 43).

9. Crosscutting tool according to Claim 6, characterised in that the said body (42, 43) comprises two different materials, the said two different materials (42, 43) preferably being constituted by an inner (42) and outer (43) concentrically arranged, essentially annular unit, the said inner annular unit (42) preferably consisting of hard metal.

10. Crosscutting tool according to Claim 9, characterised in that a movable (40) and fixed (50) crosscutting tool of this kind is provided with curved surfaces (43A, 43B; 53A, 53B) having the same radius (R).

11. Tool device for high-speed crosscutting, comprising a striking unit (10), a tool housing (20), a damper unit (30), a movable crosscutting tool (40) and a fixed crosscutting tool (50), characterised in that the said tool housing (20) comprises a solid base element (21) having a recess (219) designed for the said fixed crosscutting tool (50), the material thickness (T_s) in the direction of impact measured from an upper edge of a supporting surface (218) in the said recess (219) to an upper end surface (210) of said base element being greater than the material thickness (T_t) measured in a portion close to the said upper end surface (210) of the said base element (21) in the transverse direction relative to the direction of impact.

12. Tool device according to Claim 11, characterised in that the extent (ϕ) of the said recess (219) in the direction of impact is less than the said material thickness (T_8) in the direction of impact.